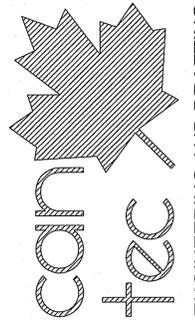


# INTERIOR RENOVATIONS NORMAN WELLS NORTHWEST TERRITORIES TENDER

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ENGINEERING AND DRAFTING  
198 MAIN STREET, WINNIPEG, MANITOBA  
Tel: (204) 942-7222 Fax: (204) 947-5777  
http://www.cantecevents.com

ISSUED FOR TENDER 14/07/16  
ISSUED FOR 50% REVIEW 14/07/16  
REVISION

SEALED BY:

## DRAWING LIST

### DRAWING LIST

- ARCHITECTURAL**
- A0.0 TITLE PAGE
  - A1.0 DEMOLITION PLAN
  - A2.0 MAIN FLOOR PLAN
  - A3.0 DETAILS
  - A8.0 SCHEDULES AND DETAILS
- MECHANICAL**
- M1.0 MAIN FLOOR - MECHANICAL
- ELECTRICAL**
- E1.0 ELECTRICAL - DEMOLITION PLAN
  - E2.0 ELECTRICAL - MAIN FLOOR PLAN
  - E3.0 ELECTRICAL - SPECIFICATION

## CONSULTANT LIST

PRIME CONSULTANT:



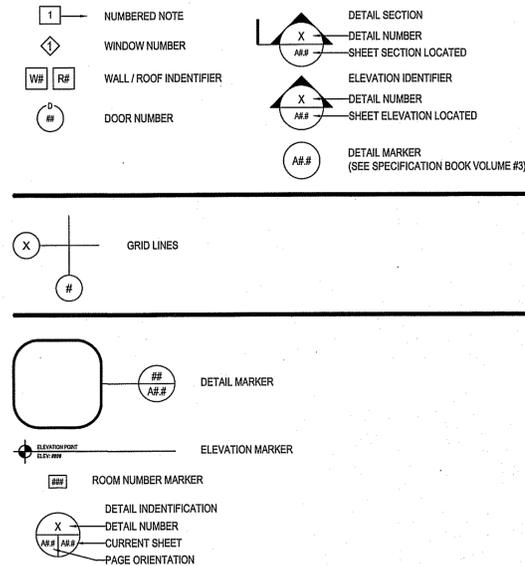
MECHANICAL ENGINEERING:



ELECTRICAL ENGINEERING:



## DRAWING SYMBOLS

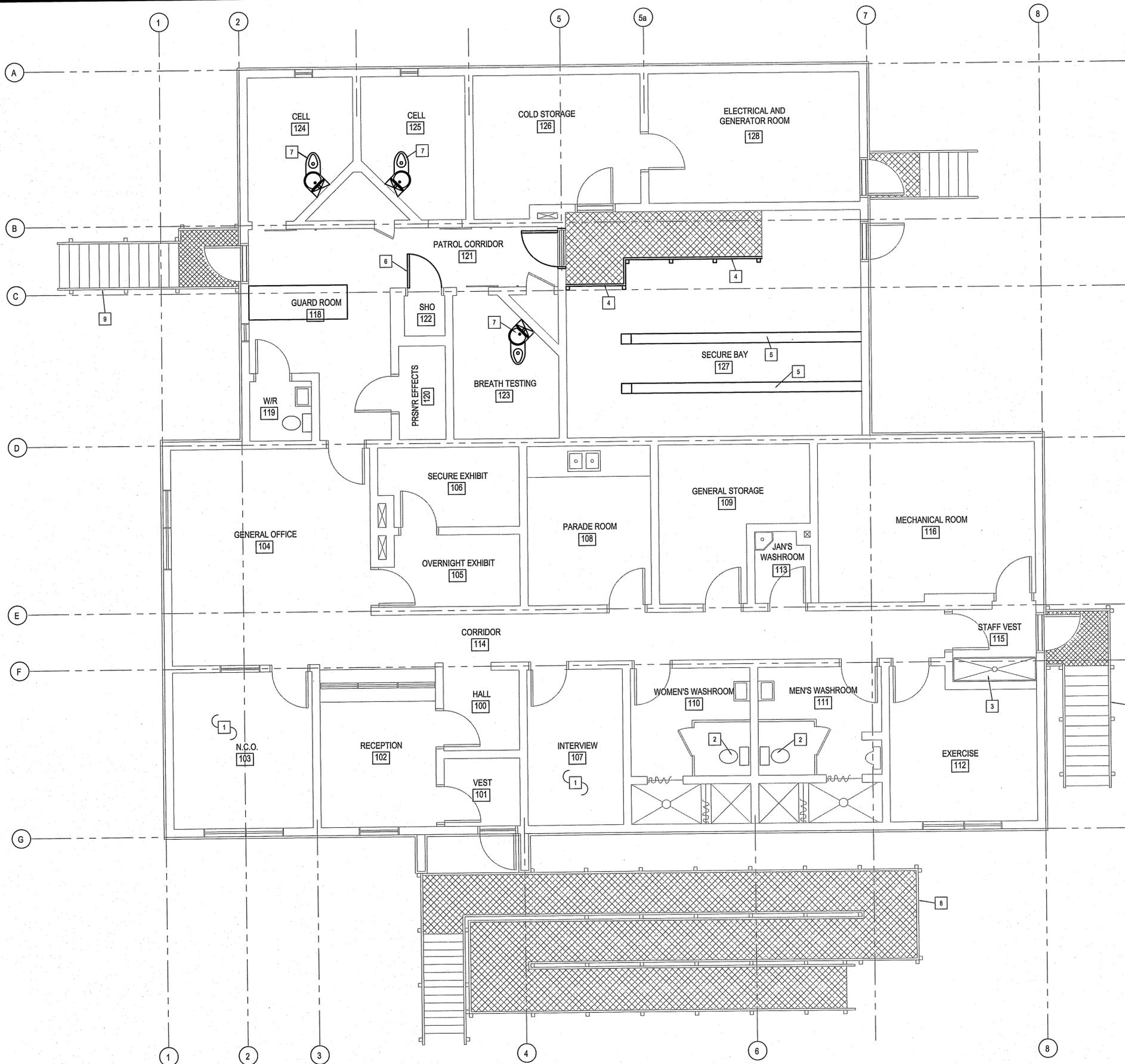


## ABBREVIATION LIST

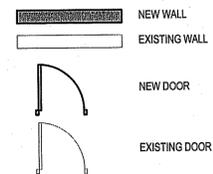
ACOUSTIC	ACST	DRYWALL	DW	LAVATORY	LAV	ROOM	RM
ADHESIVE	ADH	EACH	EA	LAY-IN ACOUSTIC TILE	LAT	ROUGH OPENING	RO
ADJUSTABLE	ADJ	EACH WAY	EW	LEFT HAND	LH	RUBBER	RB
AGGREGATE	AGGR	EAST	E	LEFT HAND REVERSE	LHR	RVT	RESILIENT SHEET FLOORING
AIR VAPOUR BARRIER	AVB	ELECTRICAL	ELEC	LENGTH	LG	SCHEDULE	SCHED
ALTERNATE	ALT	ELEVATION	EL	LIGHT	LT	SCREW	SCR
ALUMINUM	ALUM	ELEVATOR	ELEV	LOUVRE	LVR	SECTION	SECT
APARTMENT	APT	EPOXY	EP	MANUFACTURE	MFG	SELF ADHESIVE	SA
APPROXIMATE	APPROX	EQUAL	EQ	MARK	MK	SHEATHING	SHTG
ARCHITECTURE	ARCH	EQUALLY SPACED	EQ SP	MASONRY OPENING	MO	SHEET	SHT
BEAM	BM	EQUIPMENT	EQUIP	MATERIAL	MAT	SHEET VINYL	SV
BENCH MARK	BM	EXISTING	EXIST	MECHANICAL	MECH	SIMILAR	SIM
BETWEEN	BTWN	EXPANSION	EXP	MINIMUM	MIN	SOLID CORE	SC
BLOCK	BLK	EXTERIOR	EXT	MISCELLANEOUS	MISC	SOUTH	S
BOARD	BD	EXTRUDE	EXTR	NEAR FACE	NF	SPECIFICATION	SPEC
BOTH SIDES	BS	FACE TO FACE	FIF	NEAR SIDE	NS	SPRUCE	SFR
BOTH WAYS	BW	FAR SIDE	FS	NORTH	N	SPRUCE, PINE OR FIR	SIP/F
BOTTOM	BOT	FIBREBOARD	FBRBD	NOT APPLICABLE	N/A	STAIN	ST
BUILDING	BLDG	FINISH	FIN	NOT IN CONTRACT	NIC	STAINLESS STEEL	SS
CARPET	CPT	FLOOR	FL	NOT TO SCALE	NTS	STANDARD	STD
CAST IRON	CI	FLOOR DRAIN	FD	NUMBER	NO	STEEL	STL
CEILING	CLG	FLOORING	FLG	ON CENTRE	O/C	STRUCTURAL	STRUCT
CEMENT BOARD	CBD	FLUORESCENT	FLR	OUT TO OUT	O/O	SQUARE FEET	SF
CENTRE	CTR	FOOTING	FTG	OUTSIDE DIAMETER	OD	TEMPORARY	TEMP
CENTRE TO CENTRE	C/C	FOUNDATION	FDN	OUTSIDE FACE	OF	THROUGH	THRU
CERAMIC TILE	CT	FULL SIZE	FS	OVERHEAD	OH	TO MATCH EXISTING	TME
CIRCLE	CIRC	GALVANIZED	GALV	PAINT	PT	TONGUE AND GROOVE	T&G
CLEAR	CLR	GALVANIZED IRON	GI	PAINTED	PTD	TOP AND BOTTOM	T&B
COLUMN	COL	GAUGE	GA	PARTITION	PTN	TOP OF	T/O
COMPLETE WITH	CW	GLASS	GL	PLYWOOD	PLYWD	TYPICAL	TYP
CONCRETE	CONC	HARDWARE	HDW	PRECAST	PC	UNDER SIDE	UIS
CONCRETE BLOCK	CBLK	HEIGHT	HGT	PRECAST CONCRETE	PC CONC	UNDERCUT	UCUT
CONSTRUCTION	CONST	HEXAGON	HXG	PREFABRICATION	PREFAB	URINAL	UR
CONTINUOUS	CONT	HOLLOW CORE	HC	PREFINISHED	PREFIN	VAPOUR BARRIER	VB
CONTROL JOINT	CJ	HOLLOW METAL	HM	PRESSED STEEL	PS	VERTICAL	VERT
COUNTERSINK	CSK	HORIZONTAL	HORIZ	QUANTITY	QTY	VINYL ASBESTOS TILE	VAT
COVERED SHEET VINYL	CSV	INCLUSIVE	INCL	QUARRY TILE	QT	VINYL COVE BASE	VCB
DETAIL	DTL	INSIDE DIAMETER	ID	RADIUS	R	VINYL TILE	VT
DEMOLISH	DEMO	INSIDE FACE	IF	RAINWATER LEADER	RWL	VINYL WALL COVERING	VWC
DIAGONAL	DIAG	INSULATE	INSUL	REFERENCE	REF	WATER CLOSET	WC
DIAMETER	DIA	INTERIOR	INT	REINFORCE	REINF	WEATHERSTRIPPING	WS
DIMENSION	DIM	JOINT	JT	RESILIENT	RESIL	WEIGHT	WT
DOOR	DR	JOIST	JST	REVERSE	RVS	WITH	W
DOUBLE	DBL	KNOCK DOWN	KD	REVISION	REV	WITHOUT	W/O
DOWN	DN	LAMINATE	LAM	RIGHT HAND	RH	WOOD	WD

PROJECT TITLE  
INTERIOR RENOVATIONS  
SHEET TITLE  
TITLE PAGE  
DATE/TIME/SCALE  
14/02/16 AS NOTED  
LOCATION  
NORMAN WELLS, NORTHWEST TERRITORIES

TEDNER  
A0.0  
REVISION # 00  
JOB NO. 14-025-01-30



**LEGEND**



**DEMOLITION NOTES: #**

1. REMOVE FLOORING
2. REMOVE EXISTING TOILETS.
3. REMOVE EXISTING SHELVING.
4. REMOVE EXISTING HANDRAIL & GUARD RAIL.
5. REMOVE EXISTING VEHICLE STOP.
6. REMOVE EXISTING DOOR & FRAME.
7. REMOVE EXISTING CELL TOILETS
8. SCRAPE EXISTING RAMP AND STAIRS READY FOR PAINT
9. SCRAPE EXISTING STAIR READY FOR PAINT

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**ENGINEERING AND DRAFTING**  
194 HANNA STREET, WINNIPEG, MANITOBA  
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REV.#	DATE (Y/M/D)	REASON	REV. BY	CHK. BY
01	14.02.16	ISSUED FOR TENDER	RS	NC
02	14.02.16	ISSUED FOR 50% REVIEW	RS	NC
03		REVISION		

SEALED BY:

**FACILITY BUILDING - INTERIOR RENOVATION**  
**MAIN FLOOR PLAN - DEMOLITION**

PROJECT TITLE  
SHEET TITLE  
DATE (Y/M/D)  
14.02.16  
SCALE  
AS NOTED  
LOCATION  
NORMAN WELLS, NORTH WEST TERRITORIES

CHECKED BY  
NC  
DRAWN BY  
RS

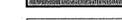
**TENDER**  
**A1.0**

REVISION #  
A  
JOB NO.  
14-025-01-30

1 MAIN FLOOR PLAN  
SCALE: 1/8"



**LEGEND**

-  NEW WALL
-  EXISTING WALL

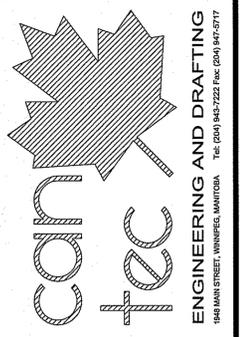
**WALL TYPES**

-  **W1** 2 x 6 #2 SPRUCE STUDS @ 300 O.C.  
2 LAYERS 3/4" G.I.S PLYWOOD  
SCREWED INTO STUDS IN  
PERPENDICULAR DIRECTIONS
-  **W2** 1 HOUR RATED WALL  
1 1/2" G.I.S PLYWOOD  
1 1/2" F.G. DRYWALL TOPPED  
2 x 6 #2 SPRUCE STUDS  
@ 300 O.C.  
SOUND BATT INSULATION  
1 1/2" F.G. DRYWALL  
19mm G.I.S PLYWOOD

**DRAWING NOTES**

1. INSTALL NEW TOILETS - SEE MECHANICAL NOTES:  
NEW MOUNTING FRAME FOR TOILETS MUST BE  
CUT INTO EXISTING CELL WALL. WALL TO BE  
REINFORCED TO ALLOW FOR NEW TOILET WALL  
SLEEVE TO BE INSTALLED.
2. NEW GUARD DESK - SEE DETAIL A1.00
3. INSTALL NEW SHOWER DOOR
4. INSTALL NEW STAINLESS STEEL SHOWER  
SURROUND.
5. INSTALL NEW SHOWER HEAD & CONTROL  
- SEE MECHANICAL
6. NEW FOLD DOWN PRISONER SEAT REMOVE  
PLYWOOD ON WALLS AND SUPPLY SOLID  
BLOCKING TO ANCHOR NEW SEAT. MAKE GOOD  
UPON COMPLETION.
7. DRILL HOLE 1/2" HOLE IN LATCH PLATE SO AS TO  
SEE ENGAGEMENT OF DOOR LATCH WHEN CELL  
LOCKED
8. ADD SECURITY SHEET TO WINDOW FACE SEE  
DETAIL SHEET A8.0
9. REPLACE ALL WALL GRILLS
10. REPLACE EXHAUST FAN
11. INSTALL NEW WALL
12. INSTALL NEW BREATH TEST BENCH C/W SINK
13. NEW DOOR & FRAME C/W NEW 2-2X10 #2 SIP  
HEADER
14. NOT USED
15. NEW EXHAUST FAN
16. NEW FLOORING & WALLS
17. REMOVE EXISTING FEEDING PORT LATCH &  
REPLACE.
18. ADD NEW DOOR VIEWER
19. REMOVE & REPLACE EXISTING HAND RAIL &  
GUARD RAIL. SEE DETAIL 12,13,14 SHEET A2.1
20. NEW COAT RACK MOUNT 8'-0" ABOVE FLOOR
21. NEW VEHICLE STOPS
22. REMOVE DAMAGED PLYWOOD ON FLOOR AND  
REPLACE ADD NEW LAYER OF 19MM TREATED  
PLYWOOD AND REPAINT EXISTING GARAGE  
FLOOR
23. REPAINT ROOM
24. SCRAPE & REPAINT ENTIRE FRONT RAMP.
25. INSTALL NEW SOUND TILES.
26. INSTALL NEW TOILET. SEE MECHANICAL
27. NEW SHELVING. SEE DETAIL 3 A2.2
28. NEW FLOORING
29. NEW SECURITY CAMERA.
30. REMOVE NON-WORKING ELECTRICAL SENSORS  
PATCH & PAINT WELL.
31. CRAWL SPACE ACCESS
32. SCRAPE AND RE-PAINT STAIR AND LANDING
33. ADD 1 LAYER OF 19MM G.I.S PLYWOOD TO ALL  
WALLS AND CEILINGS CAULK AND PAINT AS PER  
SPECIFICATION
34. REMOVE AND DISCONNECT EXISTING OUTLETS  
FROM INTERIOR OF ROOM PRIOR TO INSTALLING  
NEW PLYWOOD

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ISSUED FOR 50% REVIEW 14/02/16  
REVISION  
REV #

SEALED BY:

PROJECT TITLE  
**FACILITY BUILDING - INTERIOR RENOVATION**  
SHEET NO.  
**MAIN FLOOR PLAN**

DATE (Y/M/D)  
14/02/16  
SCALE  
AS NOTED  
LOCATION  
NORMAN WELLS, NORTH WEST TERRITORIES

DESIGNED BY  
NC  
DRAWN BY  
RS  
CHECKED BY  
NC

**1**  
A2.0  
REVISION # 00  
JOB NO. 14-025-01-30

**1** MAIN FLOOR PLAN  
SCALE: 1:50

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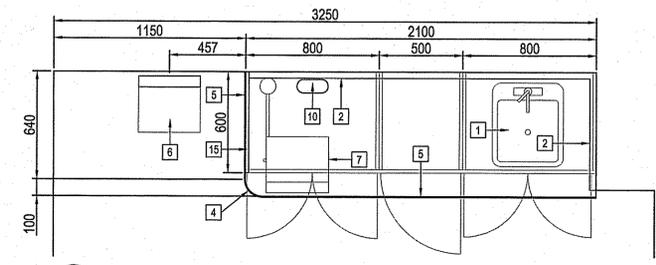


ISSUED FOR TENDER 14-02-16  
 ISSUED FOR 90% REVIEW 14-02-16  
 REGION  
 REV.#  
 DATE (Y/M/D)  
 REVISION  
 1948 MAIN STREET, WINNIPEG, MANITOBA  
 TEL: (204) 945-7222 Fax: (204) 947-5717  
 WWW.CAN-TEC-ENGINEERING.COM

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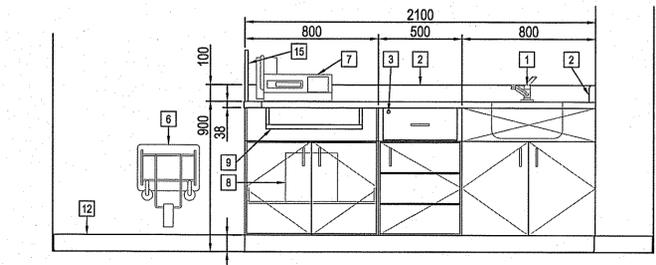
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 SHEET TITLE: SECTIONS AND DETAILS  
 DATE (Y/M/D): 14-02-16  
 SCALE: AS NOTED  
 LOCATION: NORMAN WELLS, NORTH WEST TERRITORIES  
 ORDERED BY: NC  
 DRAWN BY: RS  
 CHECKED BY: AS

TENDER  
**A2.1**  
 REVISION #: 00  
 JOB NO.: 14-025-01-30

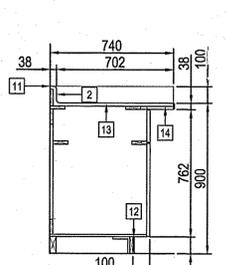


1 ROOM 126 - CABINETRY PLAN  
 A3.0 SCALE: 1:20

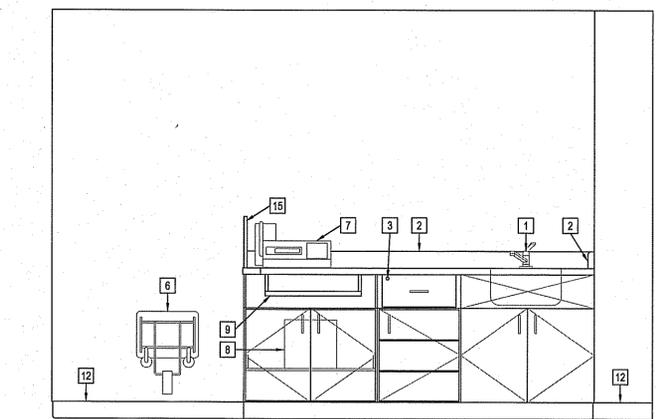
- ROOM 126 DETAIL LEGEND: ##
- 1 SINGLE LEVER FAUCET & SINGLE COMPARTMENT SINK
  - 2 BACKSPLASH / SIDESPLASH
  - 3 LOCKS
  - 4 100mm RADIUS OF COUNTERTOP
  - 5 STAINLESS STEEL EDGE
  - 6 FOLD DOWN SEAT
  - 7 INTOXIMETER
  - 8 PRINTER LOCATION
  - 9 KEYBOARD DRAWER
  - 10 GROMMET FOR CABLES TO AVOID KEYBOARD TRAY
  - 11 CAULK JOINTS
  - 12 100mm BASE
  - 13 19mm LAYER OF PLYWOOD
  - 14 2-13mm LAYERS OF PLYWOOD
  - 15 GABLE



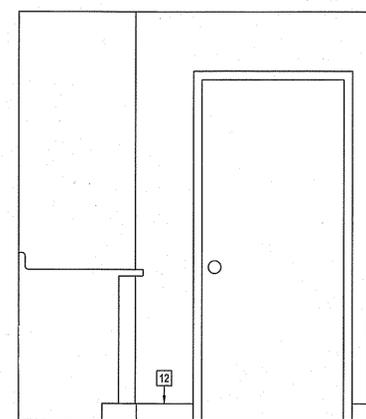
2 ROOM 126 - ELEVATION DETAIL  
 A3.0 SCALE: 1:20



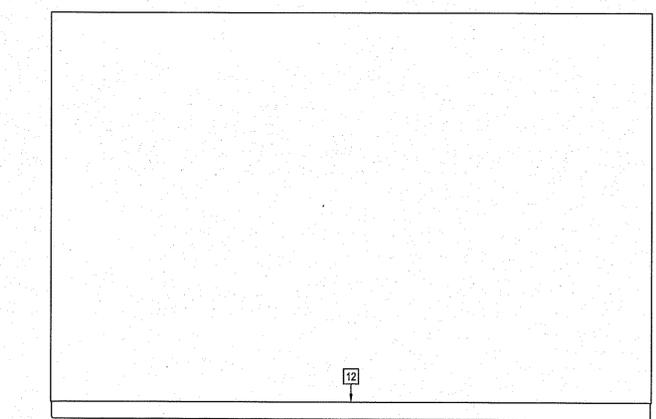
3 ROOM 126 - SECTION DETAIL  
 A3.0 SCALE: 1:20



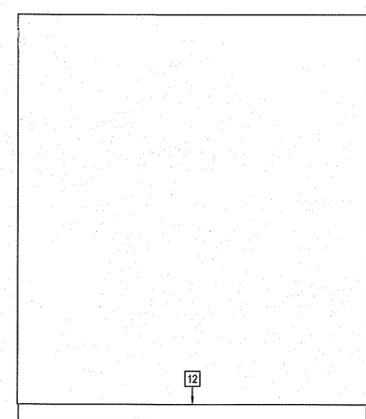
4 ROOM 126 - ELEVATION 1  
 A3.0 SCALE: 1:20



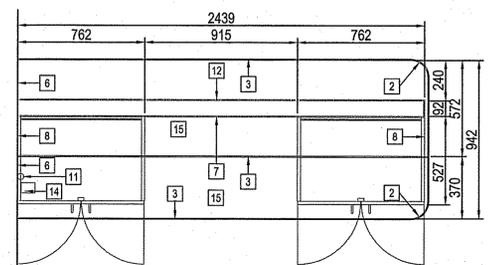
5 ROOM 126 - ELEVATION 2  
 A3.0 SCALE: 1:20



6 ROOM 126 - ELEVATION 3  
 A3.0 SCALE: 1:20

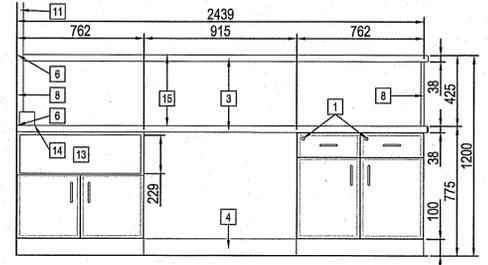


7 ROOM 126 - ELEVATION 4  
 A3.0 SCALE: 1:20

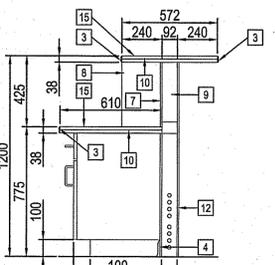


8 ROOM 118 - CABINETRY PLAN  
 A3.0 SCALE: 1:20

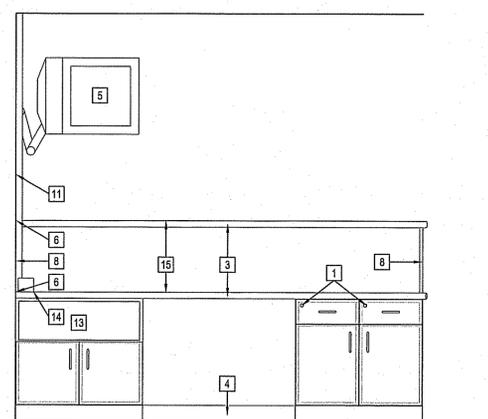
- ROOM 118 DETAIL LEGEND: ##
- 1 LOCKS
  - 2 100mm RADIUS OF COUNTERTOP
  - 3 STAINLESS STEEL EDGE
  - 4 100mm BASE
  - 5 TV TO BE REMOVED
  - 6 CAULKING
  - 7 STAINLESS STEEL REMOVABLE BOARD
  - 8 19mm GABLE TO SUPPORT COUNTER ABOVE
  - 9 92mm METAL STUD COUNTER SUPPORT WALL
  - 10 2-19mm LAYERS OF PLYWOOD
  - 11 CAMERA CABLES
  - 12 STAINLESS STEEL FACADE
  - 13 SHELF - HEIGHT OF SHELF TO BE CONFIRMED BY CONTRACTOR
  - 14 GROUND FOR CABLES TO RECORDING EQUIPMENT
  - 15 STAINLESS STEEL SURFACE



9 ROOM 118 - ELEVATION DETAIL  
 A3.0 SCALE: 1:20

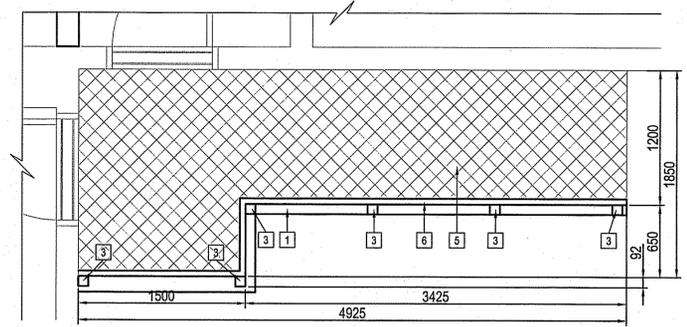


10 ROOM 118 - SECTION DETAIL  
 A3.0 SCALE: 1:20

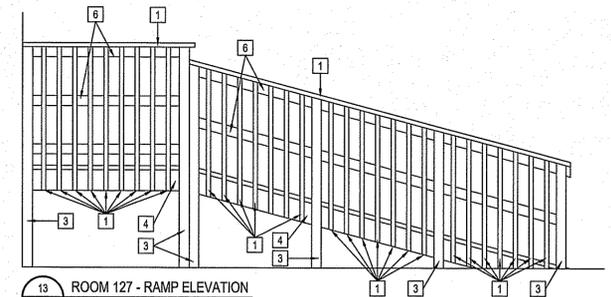


11 ROOM 118 - ELEVATION 1  
 A3.0 SCALE: 1:20

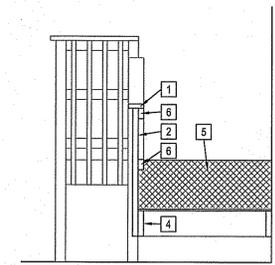
- ROOM 127 DETAIL LEGEND: ##
- 1 NEW 140mm X 38mm TOP PLATE
  - 2 NEW 38mm X 38mm P.T. PICKETS (MATCH COLOUR TO EXISTING)
  - 3 EXISTING 140mm X 140mm POST
  - 4 EXISTING JOISTS
  - 5 EXISTING SURFACE GRATE
  - 6 EXISTING HORIZONTAL BRACING



12 ROOM 127 - RAMP PLAN  
 A3.0 SCALE: 1:30



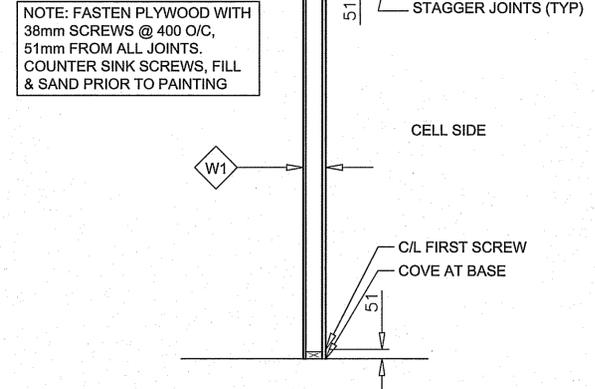
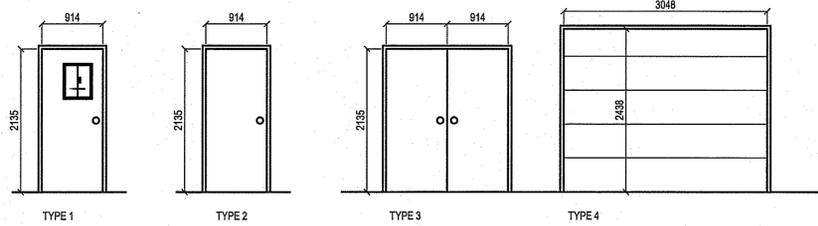
13 ROOM 127 - RAMP ELEVATION  
 A3.0 SCALE: 1:30



14 ROOM 127 - SECTION DETAIL  
 A3.0 SCALE: 1:30



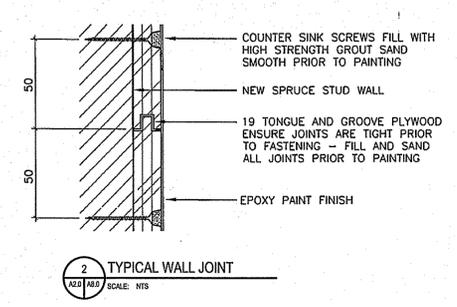
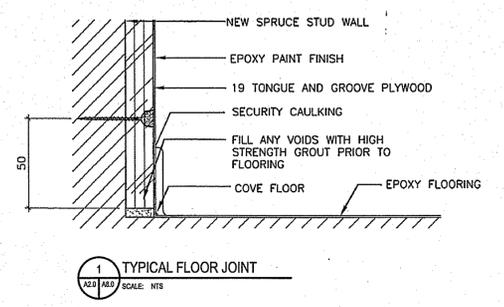
DOOR SCHEDULE															
MARK	SIZE	DOOR TYPE	DOOR ELEV.	DOOR CORE	DOOR FINISH	DOOR COLOR	DOOR GAUGE	FRAME MATERIAL	FRAME TYPE	FRAME FINISH	FRAME COLOR	FRAME GAUGE	HARDWARE	RATING	REMARKS
D1	EXISTING												3		ADD NEW DOOR VIEWER
D2	914 X 2125	HC	1	HOLLOW	PAINTED		14	STEEL	WELDED	PAINTED		14	2	N/A	C/W VIEWING PORT, SITE VERIFY SIZE TO FIT EXISTING OPENING
D3	914 X 2125	HC	2	HOLLOW	PAINTED		14	STEEL	WELDED	PAINTED		14	1	N/A	
D4	2-914X2125	INSULATED STEEL	3	INSULATED	PAINTED		14	STEEL	KD	PAINTED			4		
D5	2-914X2125	INSULATED STEEL	3	INSULATED	PAINTED		14	STEEL	KD	PAINTED			4		
D6	3048 X 2438	INSULATED	4	INSULATED	PAINTED			EXIST	EXIST	PAINTED					



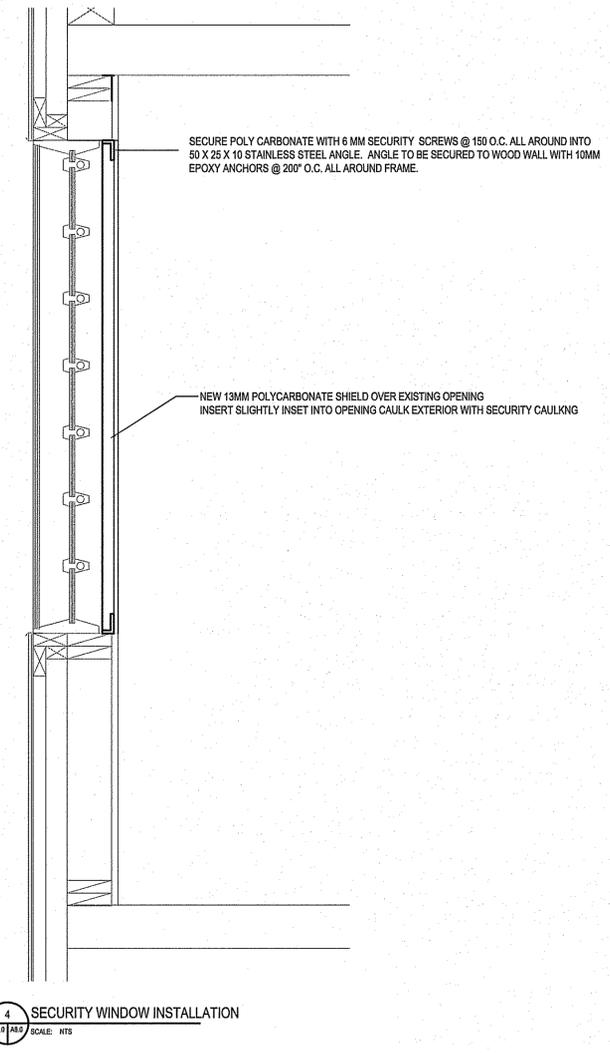
NOTE: FASTEN PLYWOOD WITH 38mm SCREWS @ 400 O/C, 51mm FROM ALL JOINTS. COUNTER SINK SCREWS, FILL & SAND PRIOR TO PAINTING

ROOM SCHEDULE														
ROOM #	ROOM NAME	FLOOR		WALLS								CEILING		REMARKS
		MATERIAL	BASE	NORTH		EAST		SOUTH		WEST		MATERIAL	FINISH	
100	HALL	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
101	VESTIBULE			DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
102	RECEPTION			DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
103	OFFICE	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
104	GENERAL OFFICE	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
105	OVERNIGHT EXHIBIT													
106	SECURE EXHIBIT													
107	INTERVIEW	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
108	MULTI PURPOSE ROOM	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
109	GENERAL STORAGE			DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
110	WASHROOM			DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
111	WASHROOM			DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
112	EXERCISE ROOM	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
113	JANITORS ROOM													
114	CORRIDOR	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
115	VESTIBULE	RSV	COVE	DW	PT	DW	PT	DW	PT	DW	PT	DW	PT	
116	MECHANICAL ROOM													
117														
118	GUARD ROOM			PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	
119	GUARD WASHROOM			PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	
120	PRISONER EFFECTS			PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	
121	PATROL CORRIDOR			PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	
122	PRISONER SHOWER			PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	PLY	EPOX	
123	CELL			PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	
124	CELL			PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	
125	CELL	EPOXY FLOORING	COVE	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	
126	BREATH TEST ROOM	EPOXY FLOORING	COVE	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	PLY	F.S.-EPOX	
127	SECURE BAY	EPOXY FLOORING	COVE	PLY	PT	PLY	PT	PLY	PT	PLY	PT	DW	PT	
128	GENERATOR ROOM													
129	COLD STORAGE			DW	PT	DW	PT	DW	PT	DW	PT	PLY	PT	
S100	STORAGE	PAINTED	N/A	PLY	PT	PLY	PT	PLY	PT	PLY	PT	PLY	PT	
S101	STORAGE	PAINTED	N/A	PLY	PT	PLY	PT	PLY	PT	PLY	PT	PLY	PT	
S102	EXERCISE ROOM	GYM FLOORING	N/A	PLY	PT	PLY	PT	PLY	PT	PLY	PT	PLY	PT	

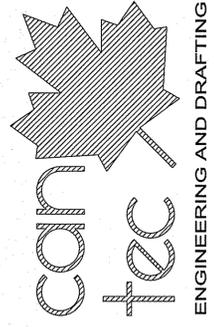
- NOTES:
- HEIGHT OF COVE TO BE 150mm OR TO MATCH EXISTING
  - F.S. EPOXY = FLAME SPREAD EPOXY



NOTE: WALL FILLER TO BE STONE SET PM-5 INSTALL AS PER MANUF INSTRUCTIONS



THIS DRAWING MUST NOT BE SCALED.  
 THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK AND IS HELD RESPONSIBLE FOR REPORTING ANY DISCREPANCY OR OMISSION TO CANTEC SERVICES LTD. IMMEDIATELY.  
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<http://www.cantecservices.com>

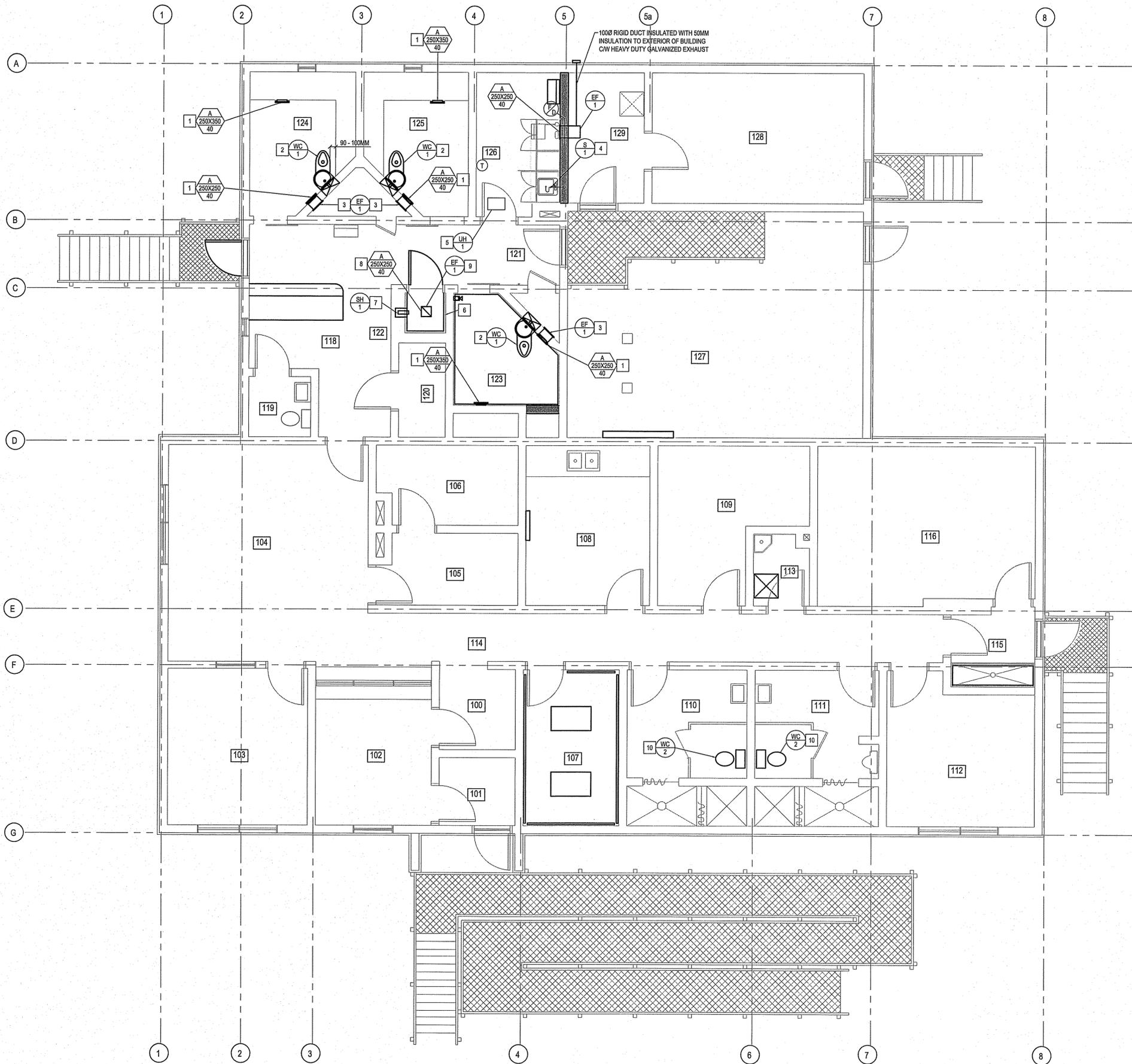


ISSUED FOR 60% REVIEW  
 14/02/25  
 DATE (Y/M/D)  
 REV # | BY |

SEALED BY:

PROJECT TITLE: FACILITY BUILDING - INTERIOR RENOVATION  
 SHEET TITLE: SCHEDULES AND DETAILS  
 DATE (Y/M/D): 14/02/16  
 SCALE: AS NOTED  
 CHECKED BY: NC  
 DRAWN BY: RS  
 LOCATION: NORMAN WELLS, NORTHWEST TERRITORIES

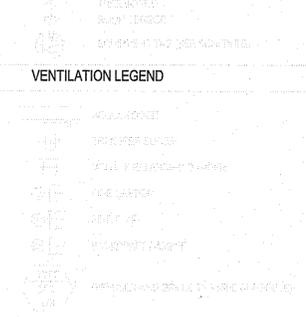
REVISION # 00  
 14-025-01-30



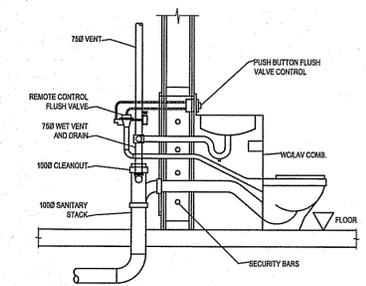
**DRAWING NOTES**

1. INSTALL NEW SECURITY GRILL
2. INSTALL NEW COMBO TOILET AND WALL SLEEVE. PLEASE NOTE THAT EXISTING TOILET DOES NOT HAVE A WALL MOUNT AND A NEW ONE MUST BE CUT INTO EXISTING WALL. WALL TO BE REINFORCED AS REQUIRED TO ACCOMMODATE NEW WALL SLEEVE
3. INSTALL NEW EXHAUST FAN IN SAME POSITION AS EXISTING.
4. NEW SINK IN BREATH ROOM. CONNECT SINK TO EXISTING PLUMBING IN CRAWL SPACE BELOW. CONNECT VENT PIPING TO EXISTING VENT PIPING IN MECHANICAL CLOSET FOR ROOM 123. FIRE STOP AS REQUIRED.
5. INSTALL NEW UNIT HEATER CWV THERMOSTAT
6. INSTALL NEW STAINLESS STEEL SHOWER SURROUND. SITE MEASURE TO ENSURE PROPER FIT. SECURITY CAULK ALL EDGES.
7. INSTALL NEW SHOWER HEAD AND SHOWER CONTROL.
8. INSTALL NEW SECURITY GRILL IN CEILING ADJUST SIZE AS NECESSARY TO FIT NEW EXHAUST FAN
9. INSTALL NEW EXHAUST FAN IN CEILING AND CONNECT TO EXISTING EXHAUST DUCT.
10. INSTALL NEW TOILET

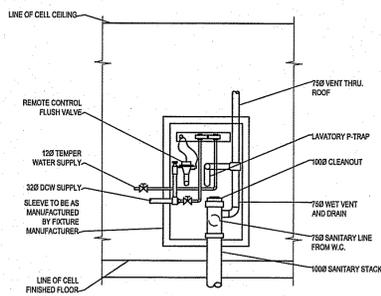
**LEGEND**



GRILLE/DIFFUSER SCHEDULE			
SYMBOL	MANUFACTURER	MODEL	REMARKS
A	VIRTUCOM-INC	VIRTUCOM SCO Security	SUPPLY GRILLE. INSTALL AS PER MANUF. INSTRUCTION

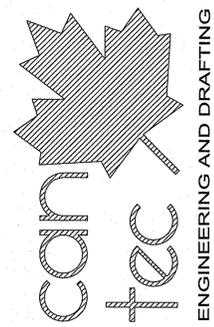


**2 WC-1 INSTALLATION DETAIL**  
SCALE: NTS



**3 WC-1 INSTALLATION ELEVATION**  
SCALE: NTS

THIS DRAWING MUST NOT BE SCALED.  
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK AND BE HELD RESPONSIBLE FOR REPORTING ANY DISCREPANCY OR OMISSION TO CAN-TEC SERVICES LTD. IMMEDIATELY.  
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14-02-16  
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REV. 100

SEAL BY:  
**PERMIT TO PRACTICE**  
CAN-TEC SERVICES LTD.  
Signature: *J. Loesel-Sitar*  
Date: *July 18, 2014*  
**PERMIT NUMBER: P 647**  
NWTNU Association of Professional Engineers and Geoscientists

PROJECT TITLE: **FACILITY BUILDING - INTERIOR RENOVATION**  
SHEET TITLE: **MECHANICAL**  
DATE (Y/M/D): 14.02.16  
SCALE: AS NOTED  
JOB NO.: 14-025-01-30  
LOCATION: NORMAN WELLS, NORTHWEST TERRITORIES  
DESIGNED BY: NC  
DRAWN BY: RS

TENDER  
**M1.0**  
REVISION #: 00  
14-025-01-30

**1 MAIN FLOOR PLAN**  
SCALE: 1:50

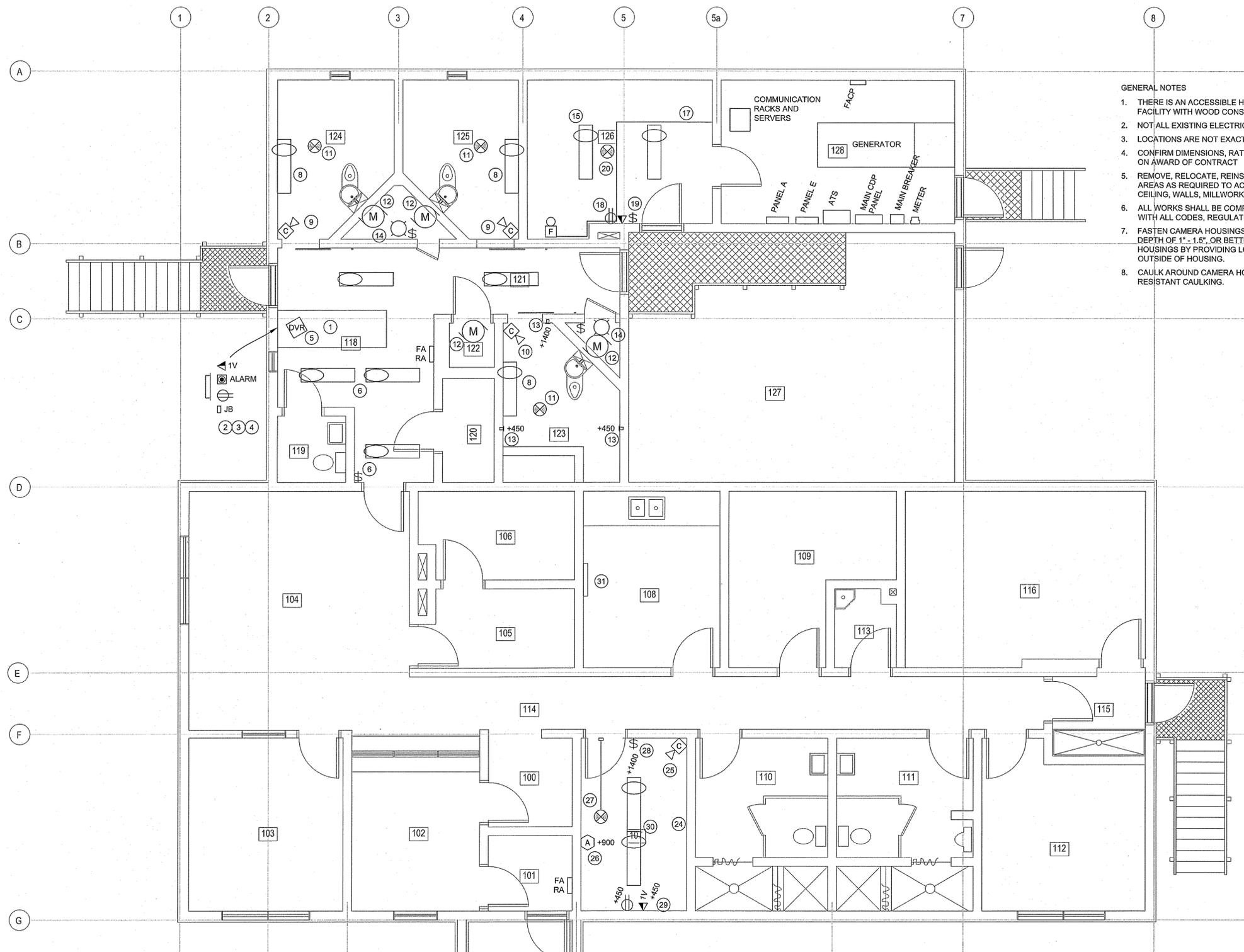


203 - Five Donald Street, Winnipeg, Manitoba, R3L 2T4  
Ph: 204 942 6391 Fax: 204 942 6399  
www.ae.ca



PERMIT TO PRACTICE  
ASSOCIATED ENGINEERING (B.C.) LTD.  
Signature: [Signature]  
Date: 21 July 2014  
PERMIT NUMBER: P 554  
The Association of Professional Engineers,  
Geologists and Geophysicists of NWT/NUNU

IF NOT 50 mm ADJUST SCALES  
SCALE(S) SHOWN ARE INTENDED FOR ANSI D (22x34) SIZE DRAWINGS, TABL/CID (11x17) SIZE DRAWINGS ARE 1/2 OF SCALE(S) SHOWN UNLESS NOTED OTHERWISE



- GENERAL NOTES**
1. THERE IS AN ACCESSIBLE HEATED CRAWLSPACE UNDER THIS FACILITY WITH WOOD CONSTRUCTION AND WOOD FLOORS.
  2. NOT ALL EXISTING ELECTRICAL IS SHOWN.
  3. LOCATIONS ARE NOT EXACT.
  4. CONFIRM DIMENSIONS, RATINGS, LAYOUTS, AND CIRCUITING ON SITE ON AWARD OF CONTRACT
  5. REMOVE, RELOCATE, REINSTALL, REWIRE ELECTRICAL IN WORK AREAS AS REQUIRED TO ACCOMMODATE RENOVATIONS TO FLOORS, CEILING, WALLS, MILLWORK, AND MECHANICAL WORKS.
  6. ALL WORKS SHALL BE COMPLETE, FUNCTIONAL, AND IN COMPLIANCE WITH ALL CODES, REGULATIONS, AND GOOD PRACTICE.
  7. FASTEN CAMERA HOUSINGS WITH FOUR 3/16" TAPCON FASTENERS TO DEPTH OF 1" - 1.5", OR BETTER. MINIMIZE CONDUIT PROTRUSION INTO HOUSINGS BY PROVIDING LOCKNUTS ON CONDUIT INSIDE AND OUTSIDE OF HOUSING.
  8. CAULK AROUND CAMERA HOUSINGS WITH APPROVED PICK RESISTANT CAULKING.

**FLOOR PLAN NOTES #**

1. NOTE THAT GUARD DESK IS TO BE REMOVED AND REPLACED WITH NEW. SEE ARCHITECTURAL DETAILS.
2. CUSTOM FLUSH RECESSED STAINLESS STEEL ENCLOSURE WITH SWITCHES FOR AREA LIGHTING AND VARIABLE SPEED SWITCHES FOR EXHAUST FANS.
3. TELEPHONE OUTLET, RECEPTACLE, AND ALARM START PUSHBUTTON RECESSED IN WALL IMMEDIATELY ABOVE EXISTING DESK HEIGHT. JB IS SURFACE MOUNT.
4. DELETE WALL MOUNTED TELEVISION MONITOR.
5. DVR EQUIPMENT ON TOP OF DESK. CCTV CABLES ARE ROUTED HERE IN SURFACE MOUNT EMT CONDUIT RUNNING DOWN WALL FROM CEILING. CABLES HAVE ADEQUATE EXTRA LENGTH TO REACH NEW DVR EQUIPMENT LOCATION.
6. REVISE SWITCHING AND CIRCUITING TO GIVE TWO LEVEL LIGHTING AT DESK.
7. N/A
8. REMOVE LUMINAIRE.
9. SECURITY CAMERA HOUSING HAS COME AWAY FROM CEILING. REATTACH HOUSING, FASTENING SECURELY.
10. REMOVE CAMERA HOUSING.
11. REMOVE SMOKE DETECTOR.
12. REMOVE EXHAUST FAN.
13. REMOVE BLANK FACEPLATES. BOXES ARE TO BE COVERED BY NEW WALL SHEATING. REWIRE ANY CIRCUIT USING THESE BOXES SO THAT NO INACCESSIBLE JUNCTION OR BOX IS LEFT BEHIND.
14. CONFIRM THERE ARE RECEPTACLES IN MECHANICAL CHASES. ALLOW FOR NEW RECEPTACLES, CONNECTED TO SAME CIRCUIT AS CHASE LIGHTING.
15. REMOVE LUMINAIRE.
16. N/A
17. RELOCATE EXISTING CEILING MOUNTED CONDUIT TO ACCOMMODATE NEW WALL CONSTRUCTION.
18. REMOVE OUTLETS TO ACCOMMODATE NEW WALL CONSTRUCTION.
19. RELOCATE LIGHT SWITCH AS REQUIRED TO ACCOMMODATE NEW WALL CONSTRUCTION.
20. RELOCATE EXISTING SMOKE DETECTOR TO ACCOMMODATE NEW WALL CONSTRUCTION.
21. N/A
22. N/A
23. N/A
24. SOUND PANELS ARE BEING ADDED TO CEILING AND TO WALLS AT 1m AND ABOVE IN ROOM 107.
25. COORDINATE SOUND PANEL INSTALLATION WITH EXISTING CAMERA HOUSING.
26. EXISTING MICROPHONE JACK OUTLET WITH SURFACE WIRMOULD TO CEILING. REMOVE AND REPLACE TO ACCOMMODATE NEW SOUND PANEL INSTALLATION.
27. CEILING MOUNTED SMOKE DETECTOR AND SURFACE MOUNT CONDUIT TO SURFACE MOUNT JB. REVISE TO ACCOMMODATE NEW SOUND PANEL INSTALLATION.
28. COORDINATE SOUND PANEL INSTALLATION WITH EXISTING LIGHT SWITCH.
29. OUTLETS ARE BELOW SOUND PANEL HEIGHT AND ARE EXISTING TO REMAIN.
30. RELOCATE LIGHTING TO ACCOMMODATE NEW SOUND PANEL INSTALLATION.
31. DELETE OBSOLETE ELECTRICAL SENSORS AND WIRING AT THIS LOCATION.

REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2014 07 18	D ROBINSON	D ROBINSON	ISSUED FOR TENDER
A	2014 07 17	D ROBINSON	D ROBINSON	ISSUED FOR 100% REVIEW

CAN-TEC ENGINEERING AND DRAFTING  
14-025-01-30

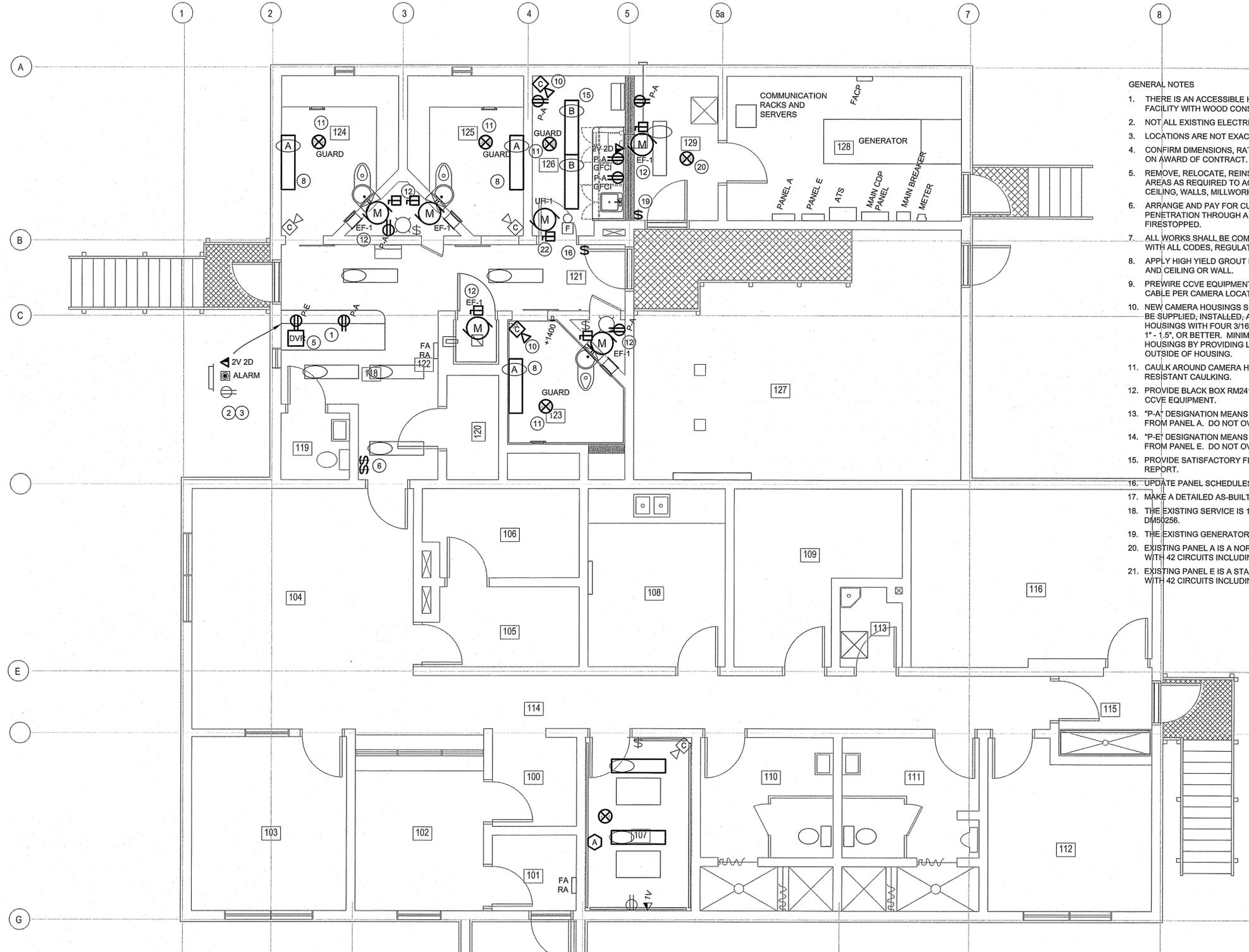
FACILITY BUILDING  
INTERIOR RENOVATION  
NORMAN WELLS, NWT  
2014-4437-00

SCALE: AS SHOWN

ELECTRICAL  
EXISTING / DEMOLITION  
MAIN FLOOR PLAN

DRAWING	REVISION	SHEET
E1.0	0	1 / 3

IF NOT 50 mm ADJUST SCALES  
 SCALES SHOWN ARE INTENDED FOR ANSI D (295x414) SIZE DRAWINGS, TABL OD (11x17) SIZE DRAWINGS ARE 1/2 OF SCALES SHOWN UNLESS NOTED OTHERWISE  
 SCALES SHOWN ARE INTENDED FOR ANSI D (295x414) SIZE DRAWINGS, TABL OD (11x17) SIZE DRAWINGS ARE 1/2 OF SCALES SHOWN UNLESS NOTED OTHERWISE



**GENERAL NOTES**

1. THERE IS AN ACCESSIBLE HEATED CRAWLSPACE UNDER THIS FACILITY WITH WOOD CONSTRUCTION AND WOOD FLOORS.
2. NOT ALL EXISTING ELECTRICAL IS SHOWN.
3. LOCATIONS ARE NOT EXACT.
4. CONFIRM DIMENSIONS, RATINGS, LAYOUTS, AND CIRCUITING ON SITE ON AWARD OF CONTRACT.
5. REMOVE, RELOCATE, REINSTALL, REWIRE ELECTRICAL IN WORK AREAS AS REQUIRED TO ACCOMMODATE RENOVATIONS TO FLOORS, CEILING, WALLS, MILLWORK, AND MECHANICAL WORKS.
6. ARRANGE AND PAY FOR CUTTING AND PATCHING AS REQUIRED. ANY PENETRATION THROUGH A FIRE RATED ASSEMBLY SHALL BE FIRESTOPPED.
7. ALL WORKS SHALL BE COMPLETE, FUNCTIONAL, AND IN COMPLIANCE WITH ALL CODES, REGULATIONS, AND GOOD PRACTICE.
8. APPLY HIGH YIELD GROUT BETWEEN CELL SMOKE DETECTOR CAGES AND CEILING OR WALL.
9. PREWIRE CCVE EQUIPMENT USING CONDUIT. PROVIDE ONE CAT 6 CABLE PER CAMERA LOCATION.
10. NEW CAMERA HOUSINGS SHALL BE BATKO FB-1303. CAMERAS SHALL BE SUPPLIED, INSTALLED, AND CONNECTED BY OWNER. FASTEN HOUSINGS WITH FOUR 3/16" TAPCON FASTENERS TO DEPTH OF 1" - 1.5", OR BETTER. MINIMIZE CONDUIT PROTRUSION INTO HOUSINGS BY PROVIDING LOCKNUTS ON CONDUIT INSIDE AND OUTSIDE OF HOUSING.
11. CAULK AROUND CAMERA HOUSINGS WITH APPROVED PICK RESISTANT CAULKING.
12. PROVIDE BLACK BOX RM2413A RACKMOUNT CABINET AT DESK FOR CCVE EQUIPMENT.
13. "P-A" DESIGNATION MEANS CONNECT TO A NORMAL POWER CIRCUIT FROM PANEL A. DO NOT OVERLOAD ANY CIRCUIT.
14. "P-E" DESIGNATION MEANS CONNECT TO A STANDBY POWER CIRCUIT FROM PANEL E. DO NOT OVERLOAD ANY CIRCUIT.
15. PROVIDE SATISFACTORY FIRE ALARM INSPECTION AND VERIFICATION REPORT.
16. UPDATE PANEL SCHEDULES.
17. MAKE A DETAILED AS-BUILT DRAWING SET.
18. THE EXISTING SERVICE IS 120/208V, 3 Ø, 4 W, 200A, METER NUMBER DM50256.
19. THE EXISTING GENERATOR IS A KOHLER 20kW STANDBY UNIT.
20. EXISTING PANEL A IS A NORMAL POWER PANELBOARD, TYPE NBLP, WITH 42 CIRCUITS INCLUDING 8 SPACES.
21. EXISTING PANEL E IS A STANDBY POWER PANELBOARD, TYPE NBLP, WITH 42 CIRCUITS INCLUDING 3 SPACES.



**PERMIT TO PRACTICE**  
 ASSOCIATED ENGINEERING (B.C.) LTD.  
 Signature: *[Signature]*  
 Date: *July 2014*  
 PERMIT NUMBER: P 554  
 The Association of Professional Engineers, Geologists and Geophysicists of NWT/NNU

**FLOOR PLAN NOTES #**

- |   |   |   |
|---|---|---|
| <ol style="list-style-type: none"> <li>1. NEW GUARD DESK.</li> <li>2. CONFIRM OPERATION OF ALL SWITCHES AND CONTROLS IN ENCLOSURE AT BEGINNING OF PROJECT.</li> <li>3. PROVIDE ADDITIONAL VOICE AND DATA CIRCUITS AND JACKS.</li> <li>4. N/A</li> <li>5. RELOCATE DVR INTO DESK MILLWORK AND RECONNECT.</li> <li>6. REVISED SWITCHING.</li> <li>7. N/A</li> <li>8. REPLACE LUMINAIRE WITH NEW FIXTURE TYPE 'A', COOPER MAX FCC-X-232-UNV-80/86-FNL (OR FMC SERIES) C/W 2-F32T8/841 AND FLUORESCENT NIGHT LITE, PREMIUM BALLAST WITH IMPROVED THD. STAMP LUMINAIRE MAKE AND MODEL INTO FRAME. TURN OVER TOOLS FOR TAMPER PROOF FASTENERS.</li> </ol> | <ol style="list-style-type: none"> <li>9. N/A</li> <li>10. PROVIDE CAMERA HOUSING.</li> <li>11. PROVIDE SMOKE DETECTOR AND GUARD.</li> <li>12. WIRE AND CONNECT NEW EXHAUST FAN, 120/1/60, FRACTIONAL HORSEPOWER. PROVIDE POWER FROM PANEL E.</li> <li>13. N/A</li> <li>14. N/A</li> <li>15. PROVIDE TYPE 'B' LUMINAIRES, COOPER FPS-232-UNV SERIES C/W 2-F32T8/841 AND PREMIUM BALLAST WITH IMPROVED THD.</li> <li>16. NEW SWITCH AND SAFETY RING COVERPLATE.</li> <li>17. N/A</li> <li>18. N/A</li> </ol> | <ol style="list-style-type: none"> <li>19. RELOCATED LIGHT SWITCH.</li> <li>20. RELOCATED SMOKE DETECTOR.</li> <li>21. N/A</li> <li>22. WIRE AND CONNECT NEW UNIT HEATER, 208/1/60, 3kW. PROVIDE POWER FROM PANLE A.</li> </ol> |
|---|---|---|

CAN-TEC ENGINEERING AND DRAFTING  
 14-025-01-30

FACILITY BUILDING  
 INTERIOR RENOVATION  
 NORMAN WELLS, NWT  
 2014-4437-00

SCALE: AS SHOWN

ELECTRICAL  
 MAIN FLOOR PLAN

DRAWING	REVISION	SHEET
E2.0	0	2 / 3

**SPECIFICATIONS**

- ALL WORKS SHALL CONFORM TO THE NATIONAL BUILDING CODE, CANADIAN ELECTRICAL CODE, AND ALL REGULATIONS IN FORCE. IN THE EVENT OF CONFLICT OR DISCREPANCY BETWEEN REGULATIONS, DRAWINGS, AND SPECIFICATIONS, ALLOW FOR THE MOST COSTLY INSTALLATION AND MEET THE MOST STRINGENT REQUIREMENTS.
- REVIEW ALL DRAWINGS AND INCLUDE ELECTRICAL FOR COMPLETE, FUNCTIONAL, AND CODE COMPLIANT SYSTEMS FOR ALL WORKS SHOWN OR IMPLIED.
- SUBMIT TO ELECTRICAL INSPECTION DEPARTMENT AND SUPPLY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. PAY ASSOCIATED FEES. THE CONTRACTOR SHALL ENSURE THAT PERMITS ARE FULFILLED SATISFACTORILY. NOTIFY CONSULTANT OF CHANGES REQUIRED BY ELECTRICAL INSPECTION DEPARTMENT PRIOR TO MAKING CHANGES. FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL INSPECTION AUTHORITY AND AUTHORITIES HAVING JURISDICTION ON COMPLETION OF WORK TO CONSULTANT, AND INCLUDE COPIES IN O&M MANUALS.
- THE ROLE OF THE ELECTRICAL CONTRACTOR INCLUDES COORDINATION OF FINAL DETAILS OF EQUIPMENT SELECTION, CONTROLS, WIRING, AND INSTALLATION. COORDINATE WITH ALL TRADES.
- CONFIRM SUITABILITY OF ALL MATERIALS AND FINALIZE SELECTIONS PRIOR TO ORDERING.
- IN ANY CONFLICT OR DISCREPANCY, NOTIFY ENGINEER AND ALLOW FOR THE MORE COSTLY ALTERNATIVE AND MEET THE MOST STRINGENT REQUIREMENTS.
- DO OVERHEAD AND UNDERGROUND SYSTEMS IN ACCORDANCE WITH CSA C22.3 NO.1.
- INSTRUCT OPERATING PERSONNEL IN THE OPERATION, CARE AND MAINTENANCE OF SYSTEMS, SYSTEM EQUIPMENT AND COMPONENTS. ENSURE THAT OPERATING PERSONNEL ARE CONVERSANT WITH ALL ASPECTS OF ITS CARE AND OPERATION.
- OPERATING VOLTAGES: TO CANS C235 83. COORDINATE ALL EQUIPMENT VOLTAGES AND CONTROL VOLTAGES.
- MOTORS, ELECTRIC HEATING, CONTROL AND DISTRIBUTION DEVICES AND EQUIPMENT TO OPERATE SATISFACTORILY AT 60 HZ WITHIN NORMAL OPERATING LIMITS ESTABLISHED BY ABOVE STANDARD. EQUIPMENT TO OPERATE IN EXTREME OPERATING CONDITIONS ESTABLISHED IN ABOVE STANDARD WITHOUT DAMAGE TO EQUIPMENT.
- EQUIPMENT AND MATERIAL TO BE CSA CERTIFIED. WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT WHICH IS NOT CSA CERTIFIED, OBTAIN SPECIAL APPROVAL FROM APPROVAL AUTHORITY.
- THE CONTRACTOR AND THE GENERAL CONTRACTOR SHALL REVIEW, STAMP, INITIAL, AND DATE SHOP DRAWINGS, THEREBY CERTIFYING APPROVAL OF SUBMISSION, VERIFICATION OF FIELD MEASUREMENTS AND COMPLIANCE WITH CONTRACT DOCUMENTS. SUBMIT SIX (6) COPIES OF SHOP DRAWINGS FOR ALL PRODUCTS AND MATERIALS. INDICATE DIMENSIONS, WEIGHTS, CONSTRUCTION, RATINGS, PERFORMANCE, APPLICATION INFORMATION, DESCRIPTION OF OPERATION, WIRING DIAGRAMS, TERMINAL DIAGRAMS, AND FEATURES AND OPTIONS WHICH ARE INCLUDED. STROKE OUT OR OTHERWISE DIFFERENTIATE MODELS, FEATURES, OPTIONS, AND OTHER INFORMATION THAT IS NOT APPLICABLE. ALL INFORMATION SHALL BE SPECIFIC TO THE PROJECT. SUBMIT FURTHER INFORMATION AND MAKE CHANGES IN SHOP DRAWINGS AS ENGINEER MAY REQUEST. CONTRACTOR'S RESPONSIBILITY FOR ERRORS, OMISSIONS, OR DEVIATIONS FROM REQUIREMENTS OF CONTRACT DOCUMENTS IS NOT RELIEVED BY ENGINEER'S REVIEW OF SUBMITTALS. DURING REVIEW, ENGINEER WILL MARK DRAWINGS TO INDICATE REVIEW STATUS. "REVIEWED" - MAKE AND DISTRIBUTE ADDITIONAL COPIES AS REQUIRED FOR EXECUTION OF THE WORK. "REVIEWED AS NOTED" - REVIEW CONSULTANT COMMENTS ON THE SHOP DRAWINGS AND INCORPORATE INTO THE WORKS, AS SUITABLE. WHERE THERE WOULD BE AN EXTRA COST OR TIME DELAY, NOTIFY CONSULTANT IN WRITING PRIOR TO PROCEEDING. MAKE AND DISTRIBUTE ADDITIONAL COPIES AS REQUIRED FOR EXECUTION OF THE WORK. "REVISE & RESUBMIT" - MAKE THE NECESSARY REVISIONS AND RESUBMIT REVISED DRAWINGS FOR REVIEW. "NOT REVIEWED" - THIS NOTATION INDICATES THAT ENGINEER HAS NOT REVIEWED THE DRAWING. REVIEW BY ENGINEER IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH REMAINS WITH CONTRACTOR, AND SUCH REVIEW DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR MEETING ALL REQUIREMENTS OF CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT THE JOB-SITE AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.
- DURING PROGRESS OF THE WORK, ACCURATELY AND NEATLY RECORD DEVIATIONS FROM CONTRACT DOCUMENTS CAUSED BY SITE CONDITIONS AND CHANGES ORDERED BY ENGINEER. RECORD LOCATIONS OF CONCEALED COMPONENTS OF MECHANICAL AND ELECTRICAL SERVICES. ON COMPLETION OF WORK AND PRIOR TO FINAL INSPECTION, SUBMIT RECORD DOCUMENTS TO OWNER.
- PROVIDE O&M MANUALS DESCRIBING ALL EQUIPMENT AND SYSTEMS WITH OPERATION AND MAINTENANCE INFORMATION, CONTRACTOR INFORMATION, SUPPLIER CONTACT INFORMATION. PRIOR TO SUBSTANTIAL PERFORMANCE OF THE WORK, SUBMIT TO ENGINEER, ONE COPY OF THE DRAFT O&M MANUAL. MANUAL SHALL BE COMPLETE, COMPREHENSIVE, AND WELL ORGANIZED, INDEXED, AND LABELED ON COVER, SPINE, AND TABS. REVISE AS INSTRUCTED AND SUBMIT FOUR FINAL COPIES - ONE TO ENGINEER AND THREE TO OWNER.
- FACTORY ASSEMBLE CONTROL PANELS AND COMPONENT ASSEMBLIES.
- PROVIDE CONTROLS, MOTOR CONTROLLERS, CONTROL DEVICES, RELAYING AND INTERLOCKING, AND DISCONNECT SWITCHES FOR EQUIPMENT EXCEPT WHERE NOTED OTHERWISE.
- SHOP FINISH METAL ENCLOSURE SURFACES BY APPLICATION OF RUST RESISTANT PRIMER INSIDE AND OUTSIDE, AND AT LEAST TWO COATS OF FINISH ENAMEL. CLEAN AND TOUCH UP SURFACES OF SHOP PAINTED EQUIPMENT SCRATCHED OR MARRED DURING SHIPMENT OR INSTALLATION, TO MATCH ORIGINAL PAINT.
- IDENTIFY ELECTRICAL EQUIPMENT WITH LAMICOID NAMEPLATES. ALLOW FOR AVERAGE OF TWENTY FIVE (25) CHARACTERS PER NAMEPLATE.

- LABEL COMMUNICATIONS EQUIPMENT AND CIRCUITS. LABEL TERMINALS, AND LABEL WIRING AT EACH END USING PERMANENT, INDELIBLE, PREMANUFACTURED LABELING SYSTEM. LABEL PATCH PANELS, CROSS CONNECTS, AND OUTLETS WITH CIRCUIT NUMBERS. OUTLET LABELING SHALL BE READILY FIELD MODIFIABLE BY OWNER.
- IDENTIFY POWER WIRING WITH PERMANENT INDELIBLE IDENTIFYING MARKINGS, EITHER NUMBERED OR COLOURED PLASTIC TAPES, ON BOTH ENDS OF PHASE CONDUCTORS OF FEEDERS AND BRANCH CIRCUIT WIRING. MAINTAIN PHASE SEQUENCE AND COLOUR CODING THROUGHOUT.
- LUGS, TERMINALS, SCREWS USED FOR TERMINATION OF WIRING TO BE SUITABLE FOR EITHER COPPER OR ALUMINUM CONDUCTORS.
- MANUFACTURER AND CSA LABELS SHALL BE VISIBLE AND LEGIBLE.
- MOUNTING HEIGHT OF EQUIPMENT SHALL BE INDUSTRY STANDARD. DO NOT INSTALL OUTLETS BACK TO BACK IN WALL; ALLOW MINIMUM 150 mm HORIZONTAL CLEARANCE BETWEEN BOXES. CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 4000 mm. COORDINATE LOCATIONS WITH OWNER PRIOR TO ROUGH IN AND CONFIRM AFTER ROUGH IN.
- MEASURE POWER CURRENT TO PANELBOARDS WITH NORMAL LOADS (LIGHTING) OPERATING AT TIME OF ACCEPTANCE. ADJUST BRANCH CIRCUIT CONNECTIONS AS REQUIRED TO OBTAIN BEST BALANCE OF CURRENT BETWEEN PHASES AND RECORD CHANGES.
- INSTALL CABLES, CONDUITS AND FITTINGS TO BE EMBEDDED OR PLASTERED OVER, NEATLY AND CLOSE TO BUILDING STRUCTURE SO FURRING CAN BE KEPT TO MINIMUM.
- ALL ELECTRICAL WORK SHALL BE CARRIED OUT BY QUALIFIED, LICENSED JOURNEYMAN ELECTRICIANS. EMPLOYEES REGISTERED IN A PROVINCIAL APPRENTICES PROGRAM SHALL BE PERMITTED, UNDER THE DIRECT SUPERVISION OF A QUALIFIED LICENSED ELECTRICIAN, TO PERFORM SPECIFIC TASKS. THE ACTIVITIES PERMITTED SHALL BE DETERMINED BASED ON THE LEVEL OF TRAINING ATTAINED AND THE DEMONSTRATION OF ABILITY TO PERFORM SPECIFIC DUTIES.
- CONDUCT TESTS AND SUBMIT WRITTEN CERTIFICATION: TEST POWER DISTRIBUTION SYSTEM INCLUDING PHASE ROTATION, PHASE AND LINE VOLTAGES, LOAD BALANCING, AND GROUND CONTINUITY; TEST BRANCH CIRCUIT WIRING WITH RECEPTACLE TYPE TESTER; TEST LIGHTING CONTROLS; TEST MOTOR TERMINAL VOLTAGES AND LINE CURRENTS, PHASE ROTATION, ROTATION DIRECTION; TEST VOICE DATA COMMUNICATION CABLEING WITH CALIBRATED TESTER; TEST FEEDERS UP TO 350 V WITH A 500 V INSTRUMENT. SUBMIT TEST RESULTS FOR REVIEW AND INCLUDE COPY IN O&M MANUAL.
- INSTALL COMPLETE PERMANENT, CONTINUOUS GROUNDING SYSTEM INCLUDING CONDUCTORS, CONNECTORS, AND ACCESSORIES. WHERE EMT IS USED, RUN GROUND WIRE IN CONDUIT. PROTECT EXPOSED GROUNDING AND BONDING CONDUCTORS FROM MECHANICAL INJURY. CONNECT BUILDING STRUCTURAL STEEL AND METAL SIDING TO GROUND. MAKE GROUNDING CONNECTIONS IN RADIAL CONFIGURATION ONLY, WITH CONNECTIONS TERMINATING AT SINGLE GROUNDING POINT. AVOID LOOP CONNECTIONS.
- BOND SINGLE CONDUCTOR, METALLIC ARMoured CABLES TO CABINET AT SUPPLY END. PROVIDE NON METALLIC ENTRY PLATE AT LOAD END.
- SUPPORTS SHALL BE HOT DIP GALVANIZED STEEL. SUPPORT EQUIPMENT, CONDUIT OR CABLES USING CLIPS, SPRING LOADED BOLTS, CABLE CLAMPS DESIGNED AS ACCESSORIES TO BASIC CHANNEL MEMBERS. FASTEN EXPOSED CONDUIT OR CABLES TO BUILDING CONSTRUCTION OR SUPPORT SYSTEM USING STRAPS. FOR SURFACE MOUNTING OF TWO OR MORE RUNS OF WIRING USE CHANNELS AT REGULAR SPACING. ENSURE ADEQUATE SUPPORT FOR RACEWAYS AND CABLES DROPPED VERTICALLY TO EQUIPMENT WHERE THERE IS NO WALL SUPPORT. DO NOT USE TIE WRAPS, WIRE LASHING, OR PERFORATED STRAP TO SUPPORT OR SECURE RACEWAYS OR CABLES.
- WIRING: GROUP RUNS; RUN PARALLEL AND SQUARE TO BUILDING LINES; RUN PLUMB AND TRUE; INSTALL HIGH AND LEAVE MAXIMUM WALL SPACE AVAILABLE FOR OTHER USE OR FUTURE USE. ALL PHASE AND NEUTRAL CONDUCTORS: COPPER; STRANDED FOR 10 AWG AND LARGER; MINIMUM SIZE 12 AWG; 1000 V XLPE INSULATION RATED RW90 OR RWU90. FULL SIZE NEUTRALS. DEDICATED NEUTRALS FOR CIRCUITS WITH HARMONIC LOADS AND CIRCUITS FOR RECEPTACLES INSIDE BUILDING. BONDING CONDUCTORS: COPPER; STRANDED FOR 10 AWG AND LARGER; MINIMUM SIZE 12 AWG; BARE OR GREEN INSULATED XLPE TO RW90 OR RWU90. UTILIZE MATERIALS, ACCESSORIES, AND METHODS SUITABLE FOR THE APPLICATION.
- BUILDING WIRES: INSULATED PHASE AND NEUTRAL IN CONDUIT; BOND IN SAME CONDUIT.
- TECK CABLE: CIRCUIT CONDUCTORS; BOND CONDUCTORS; PVC INNER JACKET; INTERLOCKING ALUMINUM ARMOR; OVERALL PVC COVERING; HAZARDOUS LOCATION RATED. ACCEPTABLE FOR UNDERGROUND CIRCUITS, EXPOSED RUNS INSTALLED ENTIRELY WITHIN SERVICE SPACES, EXPOSED RUNS IN WET LOCATIONS.
- ARMoured CABLE: CIRCUIT CONDUCTORS; BOND CONDUCTORS; INTERLOCKING ALUMINUM ARMOR; TYPE AC90. ACCEPTABLE ONLY FOR FINAL BRANCH CONNECTIONS IN DRY LOCATIONS. ACCEPTABLE EXPOSED IN SERVICE SPACES. ACCEPTABLE TO MAX 12' CABLE LENGTH FOR FINAL LIGHTING AND POWER CONNECTIONS WHERE ENTIRE CABLE LENGTH IS WITHIN ACCESSIBLE SPACE.
- ONE HOLE STEEL STRAPS TO SECURE SURFACE CONDUITS 1" AND SMALLER. TWO HOLE STEEL STRAPS FOR CONDUITS LARGER THAN 1". BEAM CLAMPS TO SECURE CONDUITS TO EXPOSED STEEL WORK. CHANNEL TYPE SUPPORTS FOR TWO OR MORE CONDUITS. THREADED RODS, 6 mm DIA., TO SUPPORT SUSPENDED CHANNELS.
- FITTINGS SHALL BE MANUFACTURED FOR USE WITH CONDUIT SPECIFIED. FACTORY "ELLS" WHERE 90 BENDS ARE REQUIRED. PROVIDE WEATHERPROOF EXPANSION FITTINGS WITH INTERNAL BONDING ASSEMBLY. WATERTIGHT EXPANSION FITTINGS WITH INTEGRAL BONDING JUMPER SUITABLE FOR LINEAR EXPANSION AND 19 mm DEFLECTION IN ALL DIRECTIONS.
- PROVIDE POLYETHYLENE FISH CORD IN EMPTY RACEWAYS AND RACEWAYS WITH COMMUNICATION WIRING.
- USE EMT IN ORDINARY DRY AREAS WHERE NOT SUBJECT TO MECHANICAL INJURY.
- USE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS OR VIBRATING EQUIPMENT. USE EXPLOSION PROOF FLEXIBLE CONNECTION FOR CONNECTION TO EXPLOSION PROOF MOTORS.
- MINIMUM CONDUIT SIZE 3/4".

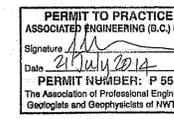
- LOCATE CONDUITS BEHIND INFRARED OR GAS FIRED HEATERS WITH 1.5 m CLEARANCE.
- SWITCHES IN FINISHED AREAS SHALL BE SPEC GRADE DECORA. SWITCHES OF ONE MANUFACTURER THROUGHOUT PROJECT.
- DUPLEX RECEPTACLES IN FINISHED AREAS SHALL BE SPEC GRADE DECORA STYLE. RECEPTACLES OF ONE MANUFACTURER THROUGHOUT PROJECT.
- COVER PLATES FOR WIRING DEVICES. COVER PLATES FROM ONE MANUFACTURER THROUGHOUT PROJECT. STAINLESS STEEL IN FINISHED AREAS. WEATHERPROOF DOUBLE LIFT SPRING LOADED CAST ALUMINUM COVER PLATES, COMPLETE WITH GASKETS FOR RECEPTACLES. IN WET LOCATIONS.
- PROVIDE DISCONNECT SWITCHES WITH PROVISION FOR PADLOCKING IN OFF POSITION, MECHANICALLY INTERLOCKED DOOR TO PREVENT OPENING WHEN HANDLE IN ON POSITION, QUICK MAKE, QUICK BREAK ACTION, ON OFF SWITCH POSITION INDICATION ON SWITCH ENCLOSURE COVER.
- PROVIDE VOICE/DATA WIRING SYSTEM COMPLETE WITH PATHWAY, BOXES, FACEPLATES, JACKS, AND TERMINATIONS FOR A COMPLETE FUNCTIONAL STRUCTURED CABLEING SYSTEM. CABLEING SHALL BE CAT 6. PATHWAY SHALL PERMIT READY INSTALLATION, REMOVAL, AND MODIFICATION OF CABLE RUNS. UTILIZE CERTIFIED EQUIPMENT AND INSTALLERS. TEST ALL CABLES.
- FIRE ALARM DEVICES SHALL BE SUITABLE FOR USE WITH EXISTING FIRE ALARM SYSTEM, EDWARDS QUICKSTART QS1.
- SMOKE DETECTOR CAGES IN CELLS SHALL BE EDWARDS 6255-004. ROTATE CONDUIT ENTRANCE COVER 90 DEGREES TO ENSURE NO OPENINGS EXISTS WHEN INSTALLED. STAMP WITH MAKE AND MODEL IN A VISIBLE LOCATION ON FACEPLATE.

**SYMBOL SCHEDULE**

-  MOTOR
-  DUPLEX RECEPTACLE
-  DIRECT ELECTRICAL CONNECTION
-  FIXTURE TYPE "A"
-  SURFACE MOUNTED OR SUSPENDED FLUORESCENT FIXTURE
-  DOWNLIGHT LUMINAIRE
-  WALL SCONCE OR WALLPACK LUMINAIRE
-  SMOKE DETECTOR
-  FIRE ALARM HORN
-  VOICE / DATA OUTLET
-  SINGLE POLE SWITCH (SWITCH "a") PANEL "A" CIRCUIT "x"
-  DISCONNECT SWITCH - UNFUSED
-  CCVE CAMERA LOCATION
-  PUSHBUTTON
-  AUDIO (MICROPHONE) CONNECTION OUTLET

**ABBREVIATIONS**

- AFF - ABOVE FINISHED FLOOR
- ATS - AUTO TRANSFER SWITCH
- CB - CIRCUIT BREAKER
- CCVE - CLOSED CIRCUIT VIDEO EQUIPMENT
- CDP - CENTRAL DISTRIBUTION PANEL
- D - DELETE
- DVR - DIGITAL VIDEO RECORDER
- E - EXISTING
- FA - FIRE ALARM
- FACP - FIRE ALARM CONTROL PANEL
- GEN - GENERATOR
- PNL - PANEL BOARD
- PL - PILOT LIGHT
- PB - PUSHBUTTON
- R - REMOVE / RELOCATE / REWIRE / REPLACE
- RA - REMOTE ANNUNCIATOR
- VS - VARIABLE SPEED SWITCH
- TXF - TRANSFORMER
- UPS - UNINTERRUPTIBLE POWER SUPPLY
- +XXX - XXX mm AFF



REV	DATE	DESIGN	DRAWN	DESCRIPTION
0	2014 07 18	D ROBINSON	D ROBINSON	ISSUED FOR TENDER
A	2014 07 17	D ROBINSON	D ROBINSON	ISSUED FOR 100% REVIEW

CAN-TEC ENGINEERING AND DRAFTING  
14-025-01-30

FACILITY BUILDING  
INTERIOR RENOVATION  
NORMAN WELLS, NWT  
2014-4437-00

SCALE: AS SHOWN

ELECTRICAL  
SPECIFICATION

DRAWING	REVISION	SHEET
E3.0	0	3 / 3